

20080321.ba v04_n156.bam.20080321

>From ???@??? Fri Mar 21 11:42:36 2008 -0500
Date: Fri, 21 Mar 2008 16:41:56 GMT
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 4156
Message-Id: <20080321164157.11FCA31815C@srvr1.theporch.com>

BOATANCHORS Digest 4156

Topics covered in this issue include:

- 1) RE: Sandstate
by spr@earthlink.net
- 2) Re: [Boatanchors] Intelligibility on SSB
by "Arden Allen" <gumbear@pacbell.net>
- 3) Re: Why hollowstate is better
by "Arden Allen" <gumbear@pacbell.net>
- 4) RE: Why hollowstate is better
by Jerry Proc <jerry7proc@yahoo.com>
- 5) Re: Why hollowstate is better
by WA5CAB@cs.com
- 6) Re: [Boatanchors] Intelligibility on SSB
by "Ken" <n5cm@rtconline.com>
- 7) Re: [Boatanchors] Intelligibility on SSB
by "B. Smith" <smithab11@comcast.net>
- 8) Re: [Boatanchors] Intelligibility on SSB
by wb3fau@att.net
- 9) RE: SX-42 project
by wb3fau@att.net
- 10) A-Tronix Repair?
by Richard Dillman <ddillman@igc.org>
- 11) Bendix "Red Bank" tubes
by John Sehring <wb0eq@yahoo.com>
- 12) Re: Bendix "Red Bank" tubes
by WA5JCI <wa5jci@flash.net>
- 13) Re: Bendix "Red Bank" tubes
by "Robert Roehrig (K9EUI)" <broehrig@aurora.edu>
- 14) Sweep gen's
by John Sehring <wb0eq@yahoo.com>
- 15) Re: Sweep gen's
by "Robert Roehrig (K9EUI)" <broehrig@aurora.edu>
- 16) Re: Sweep gen's
by spr@earthlink.net
- 17) Re: Sweep gen's
by "Arden Allen" <gumbear@pacbell.net>
- 18) Re: Sweep gen's

by Chuck McGregor <cbmcg@comcast.net>
19) Tube computer
by john <johnmb@nc.rr.com>
20) AN/ARC-3 RX alignment question
by John J Mccarty <jmccarty@alcatel-lucent.com>
21) Re: [ARC5] AN/ARC-3 RX alignment question
by Jack Antonio <scr287@sbcglobal.net>

Message-ID: <14866801.1205777738502.JavaMail.root@elwamui-darkeyed.atl.sa.earthlink.net>
Date: Mon, 17 Mar 2008 11:15:38 -0700 (GMT-07:00)
From: spr@earthlink.net
To: Old Tube Radios <boatanchors@theporch.com>
Subject: RE: Sandstate
Mime-Version: 1.0
Content-Type: text/plain; charset=UTF-8
Content-Transfer-Encoding: 7bit

Hi A. B.,

Good luck with ball grid array parts...

/scott

-----Original Message-----

>From: AB Bonds <ab@vuse.vanderbilt.edu>
>Sent: Mar 17, 2008 6:54 AM
>To: Old Tube Radios <boatanchors@theporch.com>
>Subject: RE: Sandstate
>

>I often have to deal with surface mount components because many devices only come in these packages, and my students use them for class projects. I can with some amusement report that I am the ONLY person in the Engineering School who can solder these down (yes, by hand, but with much magnification, a very fine tip and no coffee).

>
>Sometimes the old radio skills are useful....

>
>A. B. Bonds

>
>
>> -----Original Message-----

>> From: owner-boatanchors@theporch.com
>> [mailto:owner-boatanchors@theporch.com]On Behalf Of Jerry Proc
>> Sent: Sunday, March 16, 2008 12:50 PM
>> To: Old Tube Radios
>> Subject: Re: Sandstate

>>
>>
>>
>> --- David Stinson <arc5@ix.netcom.com> wrote:
>>
>> >> When the chip arrived, I was aghast.
>> > Three of these things could fit on the face of a
>> > dime;
>> > it was about 3 millimeters on a side, IIRC.
>>
>> Whenever I see surface mount anything , I head for the
>> hills. :-)
>>
>> --
>> Regards,
>> Jerry Proc
>> E-mail: jerry7proc@yahoo.com
>>
>>
>> Looking for the perfect gift? Give the gift of Flickr!
>>
>> <http://www.flickr.com/gift/>
>>
>>
>

Message-ID: <006901c88889\$fc55aef0\$e79d480c@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: [Boatanchors] Intelligibility on SSB
Date: Mon, 17 Mar 2008 16:17:25 -0700
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

> I agree that cutting the audio off at 400 to 500 cps cut the wonderful
bass
> voices but most ham rigs used 250 to 300 cps as the bottom cut off.

Y'all probly forgot the reason lows are cut off is because the bass
frequencies rob more than their fair share of power and contribute almost
nuttin to comprehension. The phone companies learned that eons ago on long
cables and radio hops. So if you get a thrill out of goosing your finals
add megabass to your rig and make like low riders busting the welds out of
their booming rides..... >-(

And don't forget the 18" wheels....

Arden Allen
KB6NAX

Message-ID: <007001c8888a\$062bfe70\$e79d480c@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Why hollowstate is better
Date: Mon, 17 Mar 2008 16:46:03 -0700
MIME-Version: 1.0
Content-Type: text/plain;
 charset="UTF-8"
Content-Transfer-Encoding: 7bit

> Not always. Worked on a KWM-1 long ago which proved to be a nightmare.
....

If it was put togther it can be taken apart. You just gotta consider it will take up all of your vacation time, no more taking the grand kids to the theme park, no taking the pooch for a walk, reconciling marriage difficulties, etc. In other words working on these things can lead to a lot of grief. BUT, think what a thrill it will be once fixed.Until it craps out again :-0

Arden Allen
KB6NAX

Date: Mon, 17 Mar 2008 20:46:47 -0400 (EDT)
From: Jerry Proc <jerry7proc@yahoo.com>
Subject: RE: Why hollowstate is better
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit
Message-ID: <546487.50642.qm@web90612.mail.mud.yahoo.com>

--- n6nae@ix.netcom.com wrote:

> Other bad fixers:
> The RF deck in an SP600. Others?
>
>

Yes indeed. The RF deck in a Canadian Marconi CSR5

receiver.

--

Regards,
Jerry Proc
E-mail: jerry7proc@yahoo.com

Looking for the perfect gift? Give the gift of Flickr!

<http://www.flickr.com/gift/>

From: WA5CAB@cs.com
Message-ID: <d46.248ef7c4.351083d1@cs.com>
Date: Mon, 17 Mar 2008 22:32:49 EDT
Subject: Re: Why hollowstate is better
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="part1_d46.248ef7c4.351083d1_boundary"

--part1_d46.248ef7c4.351083d1_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

I've read all of the tales of woe in this "hardest to work on" thread for a couple of days and all of the examples have been (by comparison) relatively easy to get at and work on receivers, mostly HF. If your schtick is working on hard to work on sets, you haven't lived until you've worked on the AN/SPS-8, AN/URN-3 or AN/WRT-2. Compared to any one of those three, ten of any of the receivers previously mentioned would be a romp in the park. I could give another half dozen examples, some from other eras, but one should never use nukes when conventional weapons will suffice, and most of you probably don't know that they ever existed anyway.

In a message dated 3/17/2008 6:47:08 PM Central Standard Time,
jerry7proc@yahoo.com writes:

> --- n6nae@ix.netcom.com wrote:
>
> >Other bad fixers:
> >The RF deck in an SP600. Others?
> >
> >
>

Robert Downs - Houston
<http://www.wa5cab.com> (Web Store)
MVPA 9480
<wa5cab@cs.com> (Primary email)
<wa5cab@comcast.net> (Backup email)

--part1_d46.248ef7c4.351083d1_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

```
* * * * *  
*      ---REMAINDER OF MESSAGE TRUNCATED---      *  
*      This post contains a forbidden message format      *  
*      (such as an attached file, a v-card, HTML formatting) *  
*      Mail Lists at theporch.com only accept PLAIN TEXT      *  
*      If your postings display this message your mail program *  
*      is not set to send PLAIN TEXT ONLY and needs adjusting *  
* * * * *
```

--part1_d46.248ef7c4.351083d1_boundary--

Message-ID: <000001c88909\$d6728700\$020fa8c0@KEN>
From: "Ken" <n5cm@rtconline.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: [Boatanchors] Intelligibility on SSB
Date: Tue, 18 Mar 2008 07:07:03 -0800
MIME-Version: 1.0
Content-Type: text/plain; charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Yes Russ,

My gripe is that Collins "saddled" Hams with a military necessity, not
needed in ham radio!
I do not carry on a QSO with a station that is "painful" to listen to
because of the military
equipment. I prefer to enjoy the experience of a good ham QSO.
Take care,

Ken N5CM

----- Original Message -----

From: <wb3fau@att.net>
To: <n5cm@rtconline.com>; "Old Tube Radios" <boatanchors@theporch.com>
Cc: "Ken" <n5cm@rtconline.com>
Sent: Sunday, March 16, 2008 4:24 PM

Subject: Re: [Boatanchors] Intelligibility on SSB

> When Collins came out with SSB, they were working with the military. The object was to get the communications thru, under the worst conditions and interference. Hence, the narrow audio bandpass, got the job done. Not best audio, for sure. Russ.

--

I am using the free version of SPAMfighter for private users. It has removed 1035 spam emails to date. Paying users do not have this message in their emails. Get the free SPAMfighter here: <http://www.spamfighter.com/len>

Message-ID: <003201c888fc\$d2f2e910\$7536c847@HAL1000>
From: "B. Smith" <smithab11@comcast.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: [Boatanchors] Intelligibility on SSB
Date: Tue, 18 Mar 2008 09:34:42 -0400
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

What is SSB?

73
k4che

ex kn4che
Dover, Delaware. Ann't nutten in Dover except a NASCAR track, chickens, and hams that can't solder.

From: wb3fau@att.net
To: Old Tube Radios <boatanchors@theporch.com>
Cc: "Ken" <n5cm@rtconline.com>
Subject: Re: [Boatanchors] Intelligibility on SSB
Date: Tue, 18 Mar 2008 15:43:34 +0000
Message-Id:
<031820081543.26205.47DFE326000CAB570000665D22230703729B0A02D29B9B0EBF9A0E00CC0D99@att.net>

Pick up or borrow a copy of "the 1st 50 years of Collins Radio" you will have a better understanding of why things were done that way. For sure, Collins had military contracts

to live up to. Ham radio was just a back room side line for Art Collins. We got some pretty nice gear as a result. Most of it easy to modify to get the sound you want. Russ.

----- Original message -----

From: "Ken" <n5cm@rtconline.com>

>

> Yes Russ,

>

> My gripe is that Collins "saddled" Hams with a military necessity, not needed in ham radio!

> I do not carry on a QSO with a station that is "painful" to listen to because of the military

> equipment. I prefer to enjoy the experience of a good ham QSO.

> Take care,

>

> Ken N5CM

>

> ----- Original Message -----

> From: <wb3fau@att.net>

> To: <n5cm@rtconline.com>; "Old Tube Radios" <boatanchors@theporch.com>

> Cc: "Ken" <n5cm@rtconline.com>

> Sent: Sunday, March 16, 2008 4:24 PM

> Subject: Re: [Boatanchors] Intelligibility on SSB

>

>

> > When Collins came out with SSB, they were working with the military.

> The object was to get the communications thru, under the worst

> conditions and interference. Hence, the narrow audio bandpass, got the

> job done. Not best audio, for sure. Russ.

>

>

> --

> I am using the free version of SPAMfighter for private users.

> It has removed 1035 spam emails to date.

> Paying users do not have this message in their emails.

> Get the free SPAMfighter here: <http://www.spamfighter.com/len>

>

From: wb3fau@att.net

To: Old Tube Radios <boatanchors@theporch.com>

Subject: RE: SX-42 project

Date: Tue, 18 Mar 2008 17:47:15 +0000

Message-Id:

<031820081747.733.47E0002300074FD1000002DD22193100029B0A02D29B9B0EBF9A0E00CC0D99@att.net>

One real surprise to me has been the audio from the FM broadcast band! I have been

baking the thing on the bench for a while, not in a hurry to do anymore work to it. I have replaced a few caps which were bad. Listening to a local classical music station, i never knew how good these sounded! Russ.

----- Original message -----

From: spr@earthlink.net

>

> Folks,

>

> In my SX-42, the only parts I couldn't get at were two 10 ohm squeal stoppers in
> the bandswitch at the rear, where the wafers are vdry cole together. So they're
> now 15 ohms, who cares? It's better than breaking wafer getting to them. The
> rest of the '42 is reasonably accessible, if you take of the side panel next o
> the RF section. Net, I found it easier than the '28.

>

> /scott

> -----Original Message-----

> >From: AB Bonds <ab@vuse.vanderbilt.edu>

> >Sent: Mar 17, 2008 10:49 AM

> >To: Old Tube Radios <boatanchors@theporch.com>

> >Subject: RE: Why hollowstate is better

> >

> >Ditto the SX-42, which is almost always toast. A test of moral fiber.

> >

> >A. B. Bonds

> >

> >

> >> -----Original Message-----

> >> From: owner-boatanchors@theporch.com

> >> [mailto:owner-boatanchors@theporch.com]On Behalf Of spr@earthlink.net

> >> Sent: Monday, March 17, 2008 12:13 PM

> >> To: Old Tube Radios

> >> Subject: RE: Why hollowstate is better

> >>

> >>

> >> Folks,

> >>

> >> RF front end on a Halli SX-28: you have to dismantle half the
> >> radio to get at it to change caps, with likelihood of wiring
> >> mistake on re-assembly. I measured the screen adn cathode
> >> voltages and left mine alone for now.

> >>

> >> /scott

> >>

> >> -----Original Message-----

> >> >From: n6nae@ix.netcom.com

> >> >Sent: Mar 17, 2008 9:33 AM

> >> >To: Old Tube Radios <boatanchors@theporch.com>
> >> >Subject: RE: Why hollowstate is better
> >> >
> >> >Not always. Worked on a KWM-1 long ago which proved to be a
> >> nightmare. Try changing the filter cap can or the
> >> rectangular power supply connector on the back end or the two
> >> T/R relays. This tiny radio wasn't meant to be repaired.
> >> Nothing is accessible. Finally gave it back to the owner and
> >> told him it was a door stop. I think he ended up tossing it.
> >> Good riddance. Should'a sold it to one of the millions of
> >> "Collins Museums". Other bad fixers: The RF deck in an
> >> SP600. Others?
> >> >
> >>
> >>
>

Message-ID: <29704361.1205962560899.JavaMail.root@mswamui-
cedar.atl.sa.earthlink.net>

Date: Wed, 19 Mar 2008 17:36:00 -0400 (EDT)

From: Richard Dillman <ddillman@igc.org>

To: Old Tube Radios <boatanchors@theporch.com>

Subject: A-Tronix Repair?

Mime-Version: 1.0

Content-Type: text/plain; charset=UTF-8

Content-Transfer-Encoding: 7bit

At KSM we have several CW memory keyboards made by the A-Tronix company of Laguna Hills, CA. We use them to send the KSM "wheel", the repeating message marking our frequencies.

We're looking for someone in a position to repair these units or, lacking that, a service manual with the complete schematic.

All advice and leads appreciated.

RD

=====
Richard Dillman, W6AWO
Chief Operator, Coast Station KSM
Maritime Radio Historical Society
<http://www.radiomarine.org>
=====

Date: Thu, 20 Mar 2008 10:17:54 -0700 (PDT)
From: John Sehring <wb0eq@yahoo.com>
Subject: Bendix "Red Bank" tubes
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit
Message-ID: <423850.64066.qm@web45604.mail.sp1.yahoo.com>

Just looking at a hardcopy (probably available on line as well) catalog from 2007-2008 Old Colony Sound Lab:

"A Brief History of Bendix Red Bank Tubes" by Charles Hanson.

"Hansen has uncovered the mysteries of these tubes and presents the history of these rugged highly reliable tubes made for military use in guided missiles [!] An interesting story of one company's approach to extremely high quality vacuum tube design. Also features Eric Barbour's 1996 article from "Vacuum Tube Valley", "Red Bank: The Ultimate Tube", which examines several models of these tubes in detail. Tube datasheets included."

Gads, never heard of 'em. Bendix was a NJ company as I recall, and Army Signal Corps' HQ was in Ft. Monmouth, near to Red Bank, NJ...or?

Tubes in missiles, wow!

I would say the F-105 (Republic's Thunderchief) fighter-bomber, on which I worked as a kid while in the USAF, had a few systems with tubes, rest was ss but some with Ge ss. Those VT's were of the pencil-thin variety & used in "power" apps. Also, other apps, e.g. automatic flight controls, used magnetic amplifiers as power amps...they didn't want to use VT's but no suitable ss stuff was yet available. Design of this a/c was from early 50's, was in service by about 1960.

Also, many Russian MIL a/c used tubes, til quite late.

VT's have a huge advantage in surviving in a heavy ElectroMagnetic Pulse environment, such as produced by a nuclear blast :(

And was not a bunch of Collins tube gear (KWM-2')
refurbished & sent to 1991 Gulf War...the ss radios
were getting zapped by the sandy environment's
electrostics.

Side note...met a guy in USAF who worked on the SAGE
computer, it had 60K tubes, weighed 250 tons &
consumed 100 kW--plus, they had a hot spare! Rather
than wait for failures, they changed 'em out on a
regular sked, that was one of his jobs. Whew!

--
Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now. [http://
mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ](http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ)

Message-Id: <7.0.1.0.1.20080320122522.0036fbe8@flash.net>
Date: Thu, 20 Mar 2008 12:27:05 -0500
To: Old Tube Radios <boatanchors@theporch.com>
From: WA5JCI <wa5jci@flash.net>
Subject: Re: Bendix "Red Bank" tubes
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

There were tubes in the Bomarc missile, in the radar IF.

de Pete WA5JCI

Date: Thu, 20 Mar 2008 13:01:14 -0500 (CDT)
From: "Robert Roehrig (K9EUI)" <broehrig@aurora.edu>
To: Old Tube Radios <boatanchors@theporch.com>
Message-ID: <922503511.231206036074403.JavaMail.root@mars.aurora.edu>
Subject: Re: Bendix "Red Bank" tubes
MIME-Version: 1.0
Content-Type: text/plain; charset=utf-8
Content-Transfer-Encoding: 7bit

----- "WA5JCI" <wa5jci@flash.net> wrote:

> There were tubes in the Bomarc missile, in the radar IF.

I don't know about the missiles themselves, but the NIKE system was almost all tubes.

--

Bob Roehrig
630-844-4898
A.U. Telecom dept.
K9EUI WD2XSH/19 W9ZGP

Date: Thu, 20 Mar 2008 12:12:41 -0700 (PDT)
From: John Sehring <wb0eq@yahoo.com>
Subject: Sweep gen's
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit
Message-ID: <247879.78753.qm@web45615.mail.sp1.yahoo.com>

Arden, would you care to elucidate me on "vari-ductor"
and "wobulator" sweeper techniques?

--John WB0EQ

=====

>I have the opportunity to purchase a Precision
Apparatus
sweep-gen,
model
E-400, late 1940's vintage. Neither the seller nor I
know its value.

.....

>I don't care
for wobulator sweepers anyway. I prefer vari-ductor
sweepers even
though
they can be tempermental. I've cured a couple and
made retrace
sweeping
optional so you can see if the up and down response
curves match.
That's
the way to make sure you are free of probe bandwidth
or AGC latency
problems.

Arden Allen
KB6NAX

--
Be a better friend, newshound, and
know-it-all with Yahoo! Mobile. Try it now. [http://
mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ](http://mobile.yahoo.com/;_ylt=Ahu06i62sR8HDtDypao8Wcj9tAcJ)

Date: Thu, 20 Mar 2008 14:58:18 -0500 (CDT)
From: "Robert Roehrig (K9EUI)" <broehrig@aurora.edu>
To: Old Tube Radios <boatanchors@theporch.com>
Message-ID: <416403358.1641206043098243.JavaMail.root@mars.aurora.edu>
Subject: Re: Sweep gen's
MIME-Version: 1.0
Content-Type: text/plain; charset=utf-8
Content-Transfer-Encoding: 7bit

----- "John Sehring" <wb0eq@yahoo.com> wrote:

> Arden, would you care to elucidate me on "vari-ductor"
> and "wobulator" sweeper techniques?

John - what I remember as being called a wobulator was a signal generator that had a speaker in it. The speaker was driven by an audio osc. There was a metal disk glued to the speaker cone that acted as a capacitor plate for the RF osc tank circuit. Exciting the speaker FM modulated the RF osc.

Not sure what a vari-ductor is - maybe a motor driven slug-tuned coil?????

--
Bob Roehrig
630-844-4898
A.U. Telecom dept.
K9EUI WD2XSH/19 W9ZGP

Message-ID: <6266651.1206044604500.JavaMail.root@elwamui-muscovy.atl.sa.earthlink.net>
Date: Thu, 20 Mar 2008 16:23:23 -0400 (EDT)

From: spr@earthlink.net
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Sweep gen's
Mime-Version: 1.0
Content-Type: text/plain; charset=UTF-8
Content-Transfer-Encoding: 7bit

Gents,

A vari-ductor is a saturable core inductor. You feed a high current at sweep rate into one winding through an RF choke and use its other winding in the oscillator tank circuit. The LF signal varies the inductance, and sweep's your janitor!

/scott

-----Original Message-----

>From: "Robert Roehrig (K9EUI)" <broehrig@aurora.edu>
>Sent: Mar 20, 2008 3:58 PM
>To: Old Tube Radios <boatanchors@theporch.com>
>Subject: Re: Sweep gen's

>

>

>----- "John Sehring" <wb0eq@yahoo.com> wrote:

>

>> Arden, would you care to elucidate me on "vari-ductor"

>> and "wobulator" sweeper techniques?

>

>John - what I remember as being called a wobulator was a signal generator that had a speaker in it. The speaker was driven by an audio osc. There was a metal disk glued to the speaker cone that acted as a capacitor plate for the RF osc tank circuit. Exciting the speaker FM modulated the RF osc.

>

>Not sure what a vari-ductor is - maybe a motor driven slug-tuned coil?????

>

>

>

>--

>Bob Roehrig

>630-844-4898

>A.U. Telecom dept.

>K9EUI WD2XSH/19 W9ZGP

>

Message-ID: <004501c88b02\$c6553ed0\$b59f480c@KB6NAX>

From: "Arden Allen" <gumbear@pacbell.net>

To: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: Sweep gen's

Date: Thu, 20 Mar 2008 20:22:12 -0700
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

> Arden, would you care to elucidate me on "vari-ductor"
> and "wobulator" sweeper techniques?

Hi John,

The "wobulator" technique, as the name suggests, employs a mechanically vibrated capacitor to sweep the oscillator frequency up and down. The Precision sweep generator, among others, uses a small permanent magnet speaker as the driving motor with 60Hz applied to the voice coil. The "vari-ductor (R)" technique, employs an oscillator coil with a common powdered iron core for the oscillator tank and a winding driven at 60Hz to modulate the core's inductance coefficient causing the oscillator to be swept up and down. The vari-ductor technique does not suffer from the asymmetrical ballistics of the mechanical model so that if you use both up and down sweep to check for response latency both up and down sweeps follow the same frequency curve. The inexpensive mechanically driven sweepers I have found to be pretty useless in that regard. There were some professional grade sweepers that used wobulation but were more sophisticated and could perform up and down sweep with good accuracy.

The green guys probably have had fun with the TRM-3 ;-)

Arden

.....

Message-ID: <47E33FAA.3090808@comcast.net>
Date: Thu, 20 Mar 2008 21:55:06 -0700
From: Chuck McGregor <cbmcg@comcast.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
CC: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Sweep gen's
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

There was a WWII FM/CW radar altimeter, the AN/APN-1, built by RCA, that had a very nice voice-coil driven capacitor used to FM the acorn tube transmitter. This was a unit designed for FM modulation - not a loudspeaker with a capacitor plate glued on. These units used to be

kicking around junkyards - I don't think anybody worked out a ham application for the units or their parts.

--Chuck

Message-Id: <6.2.1.2.2.20080321082258.03484cf0@pop-server.nc.rr.com>
Date: Fri, 21 Mar 2008 08:23:56 -0400
To: Old Tube Radios <boatanchors@theporch.com>
From: john <johnmb@nc.rr.com>
Subject: Tube computer
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Ran across this on another list and it looked quite interesting....a homebrew hollowstate computer.

<http://billp.org/baby/>

John K5MO

Message-ID: <47E3DC2F.40602@lucent.com>
Date: Fri, 21 Mar 2008 11:02:55 -0500
From: John J Mccarty <jmccarty@alcatel-lucent.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: AN/ARC-3 RX alignment question
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hello;

I got my ARC-3 receiver going and was thinking about aligning the IF. To align the over coupled stages the procedure calls out use of Shunting Unit MX-294/ARM-1. What is the shunting unit? My first guess would be just a shorting strap across the circuit that's not being adjusted, but it might be more complex than I'm imagining.

Tnx + 73

John n9hrt

Message-ID: <47E3E5B5.1090603@sbcglobal.net>
Date: Fri, 21 Mar 2008 09:43:33 -0700
From: Jack Antonio <scr287@sbcglobal.net>

MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
CC: ARC-5 <arc5@mailman.qth.net>,
Old Tube Radios <boatanchors@theporch.com>
Subject: Re: [ARC5] AN/ARC-3 RX alignment question
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

You had to go and make me dig my AN/ARM-1 out of storage. :-)

The MX-294 is a 680 ohm resistor in series with a 500 mmf capacitor. Mechanically, the components are in a little bakelite handle assembly with two female pins that slip over the pins of the if transformers.

Hope this helps

Jack

Jack Antonio WA7DIA
scr287@sbcglobal.net

John J Mccarty wrote:

> Hello;
>
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> the over coupled stages the procedure calls out use of Shunting Unit
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> strap across the circuit that's not being adjusted, but it might be more complex
> than I'm imagining.
>
> Tnx + 73
>
> John n9hrt
>
> -----
> ARC5 mailing list
> ARC5@mailman.qth.net
> <http://mailman.qth.net/mailman/listinfo/arc5>
>

End of BOATANCHORS Digest 4156
